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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/692,237	10/23/2003	Charles E. Kelly	MIC-49 (P50-0122).	8378
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DORITY & MANNING, PA & MICHELIN NORTH AMERICA, INC			A, MINH D	
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GREENVILLE, SC 29602-1449			ART UNIT	PAPER NUMBER
			2821	

DATE MAILED: 11/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/692,237

Applicant(s)

KELLY ET AL.

Examiner

Minh D. A

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 August 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-68 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 25-35, 47-49 and 55-68 is/are allowed.
- 6) ☒ Claim(s) 1, 2, 6, 7, 12-18, 20, 22-24, 36, 37, 40, 42, 43 and 47 is/are rejected.
- 7) ☒ Claim(s) 3-5, 19, 21, 38, 39, 45, 46 and 51-53 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claims 1-2, 6, 12-18, 20, 22-24, 36-37, 40, 42-43 and 47 are rejected under 35 U.S.C. 102(e) as being anticipated by Logan et al (US 6,772,505).

Regarding claims 1 and 14, Logan discloses an antenna in a tire comprising: a tire (12); a mounting member(34 or housing (52)) incorporated in the tire (12), including means for securing an antenna (32) thereto; at least a first antenna wire(32) incorporated in the tire (12) and connected to the mounting member(34 or 52); and an integrated circuit (100 having IC chip) carried by the mounting member(34 or 52) and in communication with the first antenna wire(32); wherein a length of the first antenna wire extending from the tip of the first antenna wire(32) is connected to the mounting

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member at a location spaced from the outer edge of said mounting member(34 or 52).

See figures 1-15, col.5, lines 35-67 to col.12, lines 40-55.

Regarding claim 2, Logan discloses the mounting member (34 or 52) is a small outline package. See figures 5-8.

Regarding claim 6, Logan discloses the mounting member is a printed circuit board. See figures 5-8.

Regarding claim 12, Logan discloses the mounting (34 and 52) for securing an antenna wire is a connection selected from the group consisting of soldering, welding, and crimping. See figures 5-15.

Regarding claim 13, Logan discloses the first antenna wire is in communication with the integrated circuit through a soldering connection. See figures 5-15.

Regarding claim 15, Logan discloses wherein the end of the first antenna wire extends from the first side of the mounting member through the first antenna wire receiving aperture and to the second side of the mounting member. See figures 5-15

Regarding claim 16, Logan discloses the end of the first antenna wire is further connected to the first and second sides of the mounting member by a connection selected from the group consisting of soldering, welding, and crimping. See figures 5-15

Regarding claim 17, Logan discloses the mounting member is selected from the group consisting of a printed circuit board and a small outline package. See figures 5-8.

Regarding claim 18, Logan discloses the first antenna wire has a main body in the shape selected from the group consisting of serpentine, helical, and saw tooth. See figures 1-8.

Regarding claim 20, Logan discloses a first mounting member wire (32) connected to the first antenna wire and the integrated circuit for placing the first antenna wire into communication with the integrated circuit. See figures 5-15.

Regarding claim 22, Logan discloses a mounting (34 and 52 housing) for securing an antenna wire comprises a first bonded connection through which the first antenna wire is placed into communication with the integrated circuit. See figures 5-15

Regarding claim 23, Logan n the first bonded connection is a soldered connection. See figures 5-15

Regarding claim 24, Logan discloses a second antenna wire incorporated in the tire and connected to the mounting member, wherein said means for securing further comprises a second bonded connection through which the second antenna wire is placed into communication with the integrated circuit, and. wherein the second bonded connection is a soldered connection. See figures 1-15.

Regarding claims 36 and 47, an antenna in a tire comprising: a mounting member incorporated in a tire and having a first retaining connection that is at least partially curved in shape; a first antenna wire incorporated in the tire, and connected to the first retaining connection; and an integrated circuit carried by the mounting member and in electrical communication with the first antenna wire wherein said first antenna wire is free from contact with spud integrated circuit and wherein a length of said first antenna wire is connected to said mounting member at a location spaced from the outer edge of said mounting member. See figures 1-15, col.5, lines 35-67 to col.12, lines 40-55.

Regarding claim 37, Logan discloses the mounting member includes a flat base, and wherein the first retaining connection includes a first pair of fingers that are semi-circular in shape and are attached to the base. See figures 1-15.

Regarding claim 40, Logan discloses the first antenna wire is connected to the first retaining connection by a connection selected from the group consisting of mechanical fasteners, welding, and adhesion. See figures 1-15.

Regarding claim 41, Logan discloses a mounting member incorporated in a tire and having a first retaining connection that is at least partially curved in shape; a first antenna wire incorporated in the tire, and connected to the first retaining connection; and an integrated circuit carried by the mounting member and in electrical communication with the first antenna wire; the mounting member has an axis and is generally tubular in shape, and wherein the first retaining connection includes a first angled portion that is a part of the wall of the mounting member that is angled towards the axis of the mounting member, and wherein the first antenna wire is connected to the mounting member through engagement with the first angled portion. See figures 1-15, col.5, lines 35-67 to col.12, lines 40-55.

Regarding claim 42, Logan discloses the mounting member includes a first stop that is a portion of the wall of the mounting member that is angled towards the axis of the mounting member, and wherein the first antenna wire abuts against the first stop. See figures 1-15.

Regarding claim 43, Logan discloses a first mounting member wire connected to the first antenna wire and the integrated circuit for placing the first antenna wire into

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electrical communication with the integrated circuit; and wherein the mounting member has a flat portion onto which the integrated circuit is mounted. See figures 1-15.

Regarding claim 44, Logan discloses a cover that protects the integrated circuit and the first mounting member wire. See figures 1-15.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Logan et al (US 6,772,505) in view of Forester et al (US 6,903,704).

Regarding claim 7, Logan discloses a first antenna wire in the tire and connected to circuit board, however, Logan does not disclose that, a second antenna wire (first 21A and second 21B) incorporated in the tire and connected to the printed circuit board.

Forester discloses a second antenna wire incorporated in the tire and connected to the printed circuit board. See figures 5D-5F.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to employ a second antenna wire (first 21A and second 21B) incorporated in the tire and connected to the printed circuit board such as that

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suggested by Forester in the wire antenna of Logan to provide a high level of operability can be achieved with the wireless communication.

Allowable Subject Matter

5. Claims 3-5, 19, 21, 38-39, 45-46, and 51-54 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Prior art does not teach that, a second antenna wire incorporated in said tire and connected to the small outline package; and wherein said means for securing comprises a first and second retaining groove, the first antenna wire is at least partially retained by the first retaining groove, and the second antenna wire is at least partially retained by the second retaining groove recited in dependent claim 19.

Prior art does not teach that, a second antenna wire incorporated in the tire; wherein said means for securing further comprises a second antenna wire receiving aperture extending from the first side of the mounting member to the second side of the mounting member; and wherein an end of the second antenna wire is received in the second antenna wire receiving aperture recited in dependent claim 21.

Prior art does not teach that, a second antenna wire incorporated in the tire and connected to the mounting member; and a second mounting member wire connected to

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the second antenna wire and the integrated circuit for placing the second antenna wire into communication with the integrated circuit in dependent claim 21.

Prior art does not teach that, a second antenna wire incorporated in the tire; and wherein the mounting member has a second retaining connection that is at least partially curved in shape, and wherein the second antenna wire is connected to the second retaining connection in dependent claim 38.

Prior art does not teach that, the mounting member has an axis and is generally tubular in shape; the first retaining connection includes a first angled portion that is a portion of the wall of the mounting member that is angled towards the axis of the mounting member, the first antenna wire is connected to the mounting member through engagement with the first angled portion.in dependent claim 45.

Prior art does not teach that, a mounting member is in the shape of a generally solid cylinder, the first retaining connection is a cylindrical cavity that has an annular recess; the first antenna wire has an annular projection engageable with the annular recess of the first retaining connection; and the first retaining connection is urged around the first antenna wire to help connect the first antenna wire to the mounting member in dependent claim 54.

6. Claims 25-35, 47-49, 55-68 are allowed.

Prior art does not teach that, the second antenna wire is connected to the mounting member through engagement with the second angled portion, the second antenna wire abuts against an end of the solid central section in combination with all limitations recited in independent claims 25, 35, 47,55 and 58.

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Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

2. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Koch et al (US 6,444,069) and Starkey et al (US 6,683,537) are cited to show an antenna within the tire.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Minh A whose telephone number is (571) 272-1817. The examiner can normally be reached on M-F (5:30 –2:30 PM).

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If attempts to reach the examiner by telephone is unsuccessful, the examiner's supervisor, Don Wong, can be reached on (571) 272-1834. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9306 for regular communications and (703) 872-9319 for final communications.

Any inquiry of a general nature or relating to the status of this application should be directed to the Technology Center receptionist whose telephone number is (571) 272-1553.


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PRIMARY EXAMINER

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PRIMARY EXAMINER

Examiner

Minh A

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